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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SMITH, GAMBRELL & RUSSELL, LLP 1230 PEACHTREE STREET, N.E. SUITE 3100, PROMENADE II ATLANTA, GA 30309-3592			EXAMINER METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,051

Applicant(s)

MICHAEL ET AL.

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claims 1-2, 4-5, and 10-12 are pending.

Response to Amendment

1. The disclosure is objected to because of the following informalities:

The amendment to the claims filed on March 16, 2006 does not comply with the requirements of 37 CFR 1.121(b) because it does not comply with the proper marking of the added and deleted subject matter. Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(b) which states:

(b) Specification . Amendments to the specification, other than the claims, computer listings (§ 1.96) and sequence listings (§ 1.825), must be made by adding, deleting or replacing a paragraph, by replacing a section, or by a substitute specification, in the manner specified in this section.

(1) Amendment to delete, replace, or add a paragraph .
Amendments to the specification, including amendment to a section heading or the title of the invention which are considered for amendment purposes to be an amendment of a paragraph, must be made by submitting:

(i) An instruction, which unambiguously identifies the location, to delete one or more paragraphs of the specification, replace a paragraph with one or more replacement paragraphs, or add one or more paragraphs;

(ii) The full text of any replacement paragraph with markings to show all the changes relative to the previous version of the paragraph. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strikethrough cannot be easily perceived;

(iii) The full text of any added paragraphs without any underlining; and

(iv) The text of a paragraph to be deleted must not be presented with strike-through or placed within double brackets. The instruction to delete may identify a paragraph by its paragraph

number or include a few words from the beginning, and end, of the paragraph, if needed for paragraph identification purposes.

(2) Amendment by replacement section . If the sections of the specification contain section headings as provided in § 1.77(b), § 1.154(b), or § 1.163(c), amendments to the specification, other than the claims, may be made by submitting: (i) A reference to the section heading along with an instruction, which unambiguously identifies the location, to delete that section of the specification and to replace such deleted section with a replacement section; and;

(ii) A replacement section with markings to show all changes relative to the previous version of the section. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived.

(3) Amendment by substitute specification . The specification, other than the claims, may also be amended by submitting:

(i) An instruction to replace the specification; and

(ii) A substitute specification in compliance with §§ 1.125(b) and (c).

(4) Reinstatement of previously deleted paragraph or section . A previously deleted paragraph or section may be reinstated only by a subsequent amendment adding the previously deleted paragraph or section.

(5) Presentation in subsequent amendment document . Once a paragraph or section is amended in a first amendment document, the paragraph or section shall not be represented in a subsequent amendment document unless it is amended again or a substitute specification is provided. (Emphasis added).

The use of the single brackets renders the instructions regarding the deleted subject matter unclear according to the rules, which the printer follows. Since the paragraphs are not indented in the originally filed specification, applicants should indicate the page and line number of the beginning and end of the paragraph to be replaced. Any paragraphs that have been amended by replacement should include the appropriate underlining for insertions and either strike through or double brackets for

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deletion. Applicants should resubmit the amendments to the specification in proper form.

Appropriate correction is required to this action to be fully responsive.

Specification

2. The disclosure is objected to because of the following informalities:

The substructures set forth at page 2 of the instant specification should more clearly set forth the Aerosil they correspond and indicate appropriate bonds as open bonds and/or between elemental atoms.

Appropriate correction is required.

Claim interpretation

3. Claims 1-2 and 4 are directed to a hydrophobic, pyrogenically produced silica. Claim 10 is directed to a dispersion of hydrophobic, pyrogenically produced silica produced by the process of claim 5. Claims 1-2, 4, 10, and 12 are directed to compositions drafted in product-by-process format. For products drafted in product-by-process format, the determination of patentability is based on the product itself. Please see MPEP 2113.

Claims 5 and 11 are directed to processes for the production of hydrophobic, pyrogenically produced silica and a dispersion of hydrophobic, pyrogenically produced silica.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-2, 4-5, and 10-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No basis for the amendment of the claims, setting forth that the silica is "compacted only by a roller compactor or only by a belt filter press", was set forth and none was found. Said amendment is deemed to be new matter.

While applicants disclose "silica compacted by a roller compactor or by a belt filter press", it is unclear where applicants disclose the concept of "silica compacted only by a roller compactor or only by a belt filter press". It is unclear that applicants contemplated said concept at the time of filing the original specification.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action.

Paragraphs (e) are included as they pertain to Hartmann et al relied on below:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-2, 4, 10, and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over anticipated by Degussa AG, EP 0 808 880 A2 (hereafter Degussa), as evidenced by Hartmann et al, US 5,959,005¹. Hartmann et al is a patent family member of Degussa '880 and is used as translation evidence of the Degussa '880 disclosure. The citations refer to those set forth in Hartmann et al but the disclosure are considered to be the same or substantially the same.

Hartmann et al and Degussa (example) disclose the treatment of Aerosil 200, a pyrogenically produced silica produced by Degussa AG, was hydrophobically surface treated with hexamethyldisilazane followed by being compressed mechanically. Said hydrophobic silica is disclosed as having a tamped density of between 50 and 300 which 188 grams/liter exemplified.

Hartmann et al and Degussa (column 1, lines 47 et seq) disclose the use of the silica in low viscosity liquid systems that would require the formation of a dispersion as claimed.

While applicants attach an excerpt of a document in German in their preliminary remarks (filed March 12, 2004) and assert ball milling destroys the silica aggregate structure and the thickening effect is no further available. (1) Initially, the document cannot be properly evaluated as it is not in the English language and an English language equivalent or English language translation has not been provided. (2) The claims do not define the structure or the thickening effect and it has not been shown that the instant methods necessarily result in a different product. The claims also do not exclude further milling. (3) It has furthermore not been shown the instant compositions are not made by the prior art process employing vertical ball mill compaction.

To the extent the Hartmann et al and Degussa products differ from the claims in the structure and/or properties, some variation of the structure and/or properties would have been expected from batch to batch as an obvious variation contemplated in the

¹ Degussa has a publication date of 26 November 1997 and qualifies as prior art under 35 USC 102(b) whereas Hartmann et al qualifies as prior art under 35 USC 102(e).

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Hartmann et al and Degussa references. Said difference has not been shown to be a patentable difference. Attention is directed to MPEP 2113.

Claim 11 is implicitly disclosed for the Hartmann et al and Degussa disclosed use of the materials as additives in silicone rubber systems, adhesives, molding compounds, jointing compounds, paints, gels, liquid plastic systems among others.

10. Claims 1-2, 4, 10, and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over anticipated by Nippon Aerojiru KK, JP 06-087609, as evidenced by Machine Translation (Pattera Instant MT Machine Translation, Date of Translation unavailable). Nippon Aerojiru KK ([0005] and examples) discloses hydrophobic pyrogenic silica having densities of 80-300 g/l and ([0008] and examples, particularly example 3) having been reacted with halogen free silanes including trimethylsilane ethoxide or trimethylsilane methoxide.

While applicants attach an excerpt of a document in German in their preliminary remarks (filed March 12, 2004) and assert ball milling destroys the silica aggregate structure and the thickening effect is no further available. (1) Initially, the document cannot be properly evaluated as it is not in the English language and an English language equivalent or English language translation has not been provided. (2) The claims do not define the structure or the thickening effect and it has not been shown that the instant methods necessarily result in a different product. The claims also do not exclude further milling. (3) It has furthermore not been shown the instant compositions are not made by the prior art process employing vertical ball mill compaction.

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To the extent the Nippon Aerojiru KK products differ from the claims in the structure and/or properties, some variation of the structure and/or properties would have been expected from batch to batch as an obvious variation contemplated in the Nippon Aerojiru KK reference. Said difference has not been shown to be a patentable difference. Attention is directed to MPEP 2113.

Claim 11 is implicitly disclosed for the Nippon Aerojiru KK disclosed use of the materials as additives in silicone oil to determine .

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Degussa AG, EP 0 808 880 A2 (hereafter Degussa), as evidenced by Hartmann et al, US 5,959,005, or Nippon Aerojiru KK, JP 06-087609, as evidenced by Machine Translation (Pattera Instant MT Machine Translation, Date of Translation unavailable), each optionally further in view of Klinge et al., US 4,877,595² or the Reinhardt et al, US 3,860,682.

Hartmann et al and Degussa (example and claims) disclose pyrogenically produced silica hydrophobically surface treated with hexamethyldisilazane followed by being compressed mechanically.

Hartmann et al and Degussa differ from the claims in the particular type of compaction method employed in compacting the silica. Hartmann et al and Degussa (example) disclose compressing the silica on a continuously operating vertical ball mill rather than the claimed roller compactor or belt filter press.

² Klinge et al., US 4,877,595, is a patent family member of EP 0 280 851 B1 instantly disclosed and employed by applicants as a compressing method.

Nippon Aerojiru KK ([0005] and examples) discloses hydrophobic pyrogenic silica having densities of 80-300 g/l and ([0008] and examples, particularly example 3) having been reacted with halogen free silanes including trimethylsilane ethoxide or trimethylsilane methoxide. Nippon Aerojiru KK ([0010]) discloses the use of ball, conical, or tower mills.

The roller compactor or belt filter press are conventionally known methods of compressing and/or compacting particulate materials and have not been shown nor disclosed to be unobvious over the use of the exemplified continuously operating vertical ball mill. It would have been obvious to one having ordinary skill in the art at the time of applicants' invention to employ conventional compress steps in making the compressed silicas in accordance with the methods disclosed in the Hartmann et al and Degussa references for their use as functional equivalent method steps of compressing the Hartmann et al and Degussa silica materials.

Klinge et al discloses methods of compressing pyrogenic silica and is a roller compactor and/or a belt filter press as claimed. Klinge et al (column 1) further teaches roller compactors as mechanical compressing methods. Klinge et al (column 4, lines 1-26) discloses the compressing of Aerosil R 972 to a value of 90-120 g/l. Aerosil R 972 is a hydrophobicized pyrogenic silica.

Reinhardt et al (figures and column 1) discloses roller compactors for the treatment of surface active fillers including silicium oxide for the advantage of increasing the volumetric weight without destroying or adversely influencing their specific

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characteristics. Said treatment is further taught as advantageous for the purpose of transportation and storage of the materials taught for treatment.

These references are combinable because they teach mechanical compressing methods of treating pyrogenic silica and processes and compositions produced therein. It would have been obvious to one having ordinary skill in the art at the time of applicants' invention to employ either a roller compactor or belt filter press method of mechanically compressing the pyrogenic silica taught in the Hartmann et al and Degussa references.

Response to Arguments

12. Applicant's arguments filed March 16, 2006 have been fully considered but they are not persuasive.

13. Applicants' (pages 7 through 9) arguments are not commensurate in scope with the claims, which include product-by-process format claims. Applicants have not shown the process limitations to necessarily impart product distinctions.

Furthermore, attorney's arguments cannot take the place of evidence in the record. *In re DeBlauwe*, 736 F.2d 699, 705, 222 U.S.P.Q. 191, 196 (Fed. Cir. 1984). The burden of proving unexpected results rests on the party which asserts them. In proving such results, it is not enough just to show that certain results are obtained. The results to be probative of nonobviousness must be shown to have been unexpected to the skilled worker in the art. Moreover, it is axiomatic that evidence presented to rebut a *prima facie* case of obviousness must be commensurate in scope with the claims the evidence is offered to support.

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Furthermore, applicants state at page 3, lines 16 et seq, that the “viscosity also exhibits no clear systematic dependency upon tamped density”. Tamped density is clearly related to compacting.

Lastly, the claims do not recite any limitation regarding thickening or aggregation argued.

14. Applicants assert the Nippon reference employs milling, which the present invention does not. Regarding the product claims, said alleged difference has not been shown to impart patentability to the products as claimed. Furthermore, the claims employ open language, i.e., “comprising”, and therefore would not exclude the milling step that does not only result in compacting the silica.

15. Applicants’ (pages 10 and 11) arguments regarding the moisture content of the silica have not been deemed persuasive since the claims do not define a moisture content and the Reinhardt citation is a preferred description, not an exclusion. The references are considered for what they fairly suggest and are not limited only to the preferred embodiments.

Conclusion

16. Applicant’s amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712